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WHAT IS CLAIMED IS:

1. A non-naturally occurring construct which when present in a cell produces a product, said construct comprising at least one modified nucleotide, a nucleotide analog or a non-nucleic acid entity, or a combination of the foregoing.

2. The construct of claim 1, wherein said construct or a portion thereof is linear, circular or branched.

3. The construct of claim 1, wherein said construct or a portion thereof is single-stranded, double-stranded, partially double-stranded or triple-stranded.

4. The construct of claim 3, having at least one terminus, said terminus comprising a polynucleotide tail.

5. The construct of claim 4, wherein said polynucleotide tail is hybridized to a complementary polynucleotide sequence.

6. The construct of claim 1, wherein said construct comprises DNA, RNA, a DNA-RNA hybrid, a DNA-RNA chimera, or a combination of the foregoing.

7. The construct of claim 1, wherein said modified nucleotide has been chemically modified.

8. The construct of claim 6, wherein said chemical modification has been effected to a moiety independently selected from a base, a sugar, and a phosphate, or a combination thereof.

9. The construct of claim 1, wherein at least one of said nucleotide analog or analogs have been modified on the backbone or sidechain or both.

10. The construct of claim 1, wherein said non-nucleic acid entity is attached to a single strand or to both strands of said sequence segment.

11. The construct of claim 1, wherein said non-nucleic acid entity or entities are selected from a natural or synthetic polymer, and a natural or synthetic ligand, or a combination thereof.

12. The construct of claim 11, wherein said natural polymer comprises a modified or unmodified member selected from a polypeptide, a protein, a polysaccharide, a fatty acid, and a fatty acid ester, or a combination of the foregoing.

13. The construct of claim 11, wherein said synthetic polymer comprises a homopolymer or heteropolymer.

14. The construct of claim 13, wherein said homopolymer or heteropolymer carries a net negative charge or a net positive charge.

15. The construct of claim 1, wherein said construct exhibits a further biological activity imparted by said modified nucleotide, said nucleotide analog, said nucleic acid entity, a ligand, or a combination of the foregoing.

16. The construct of claim 15, wherein said biological activity is selected from nuclease resistance, cell recognition, cell binding, and cellular or nuclear localization, or a combination of the foregoing.

17. The construct of claim 1, further comprising at least one ligand attached covalently or noncovalently to said modified nucleotide or nucleotides, nucleotide analog or analogs, non-nucleic acid entity or entities, or a combination thereof.

18. The construct of claim 17, wherein said ligand or ligands are attached to a single stranded segment, a double stranded segment, a single stranded construct tail, or a sequence complementary to a construct tail, or a combination of the foregoing.

19. The construct of claim 17, wherein said ligand or ligands are selected from macromolecules and small molecules, or a combination of both.

20. The construct of claim 1, wherein said construct carries a net positive charge, or a net negative charge, or is neutral or hydrophobic.

21. The construct of claim 1, wherein said construct comprises unmodified nucleotides and at least one member selected from one or more nucleotide analogs and non-nucleic acid entities, or a combination thereof.

22. A construct which when present in a cell produces a product, said construct being bound non-ionically to an entity comprising a chemical modification or a ligand.

23. The construct of claim 22, having at least one terminus, said terminus comprising a polynucleotide tail.

24. The construct of claim 23, wherein said polynucleotide tail is hybridized to a complementary polynucleotide sequence.

25. The construct of claim 24, wherein an antibody is bound to said hybridized polynucleotide tail sequences.

26. The construct of claim 25, wherein said antibody comprises a polyclonal or monoclonal antibody.

27. A composition comprising:

(a) a non-natural entity which comprises:

at least one domain to a nucleic acid component; and

at least one domain to a cell of interest; and

(b) said nucleic acid component;

wherein the domain or domains to said nucleic acid component are different from the domain or domains to said cell.

28. The composition of claim 27, wherein said entity comprises a binder.

29. The composition of claim 28, wherein said binder and said domain are the same.

30. The composition of claim 28, wherein said binder and said domain are different.

31. The composition of claim 28, wherein said binder is selected from a polymer, a matrix, a support, or a combination of any of the foregoing.

32. The composition of claim 27, wherein said nucleic acid component is selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a

virus, a viral fragment, a viral vector, a viroid, a phage, a plasmid, a plasmid vector, a bacterium and a bacterial fragment, or a combination of the foregoing.

33. The composition of claim 27, wherein said cell is prokaryotic or eukaryotic.

34. The composition of claim 27, wherein said domains are attached covalently or noncovalently, or through a binder, or a combination thereof.

35. The composition of claim 34, wherein said noncovalent binding is selected from ionic interactions and hydrophobic interactions, or a combination thereof.

36. The composition of claim 35, wherein said noncovalent binding comprises a specific complex.

37. The composition of claim 36, wherein said specific complex is mediated by a ligand binding receptor.

38. The composition of claim 37, wherein said ligand binding receptor is selected from a polynucleotide sequence to be recognized by its complementary sequence, an antigen to be recognized by its corresponding monoclonal or polyclonal antibody, an antibody to be recognized by its corresponding antigen, a lectin to be recognized by its corresponding sugar, a hormone to be recognized by its receptor, a receptor to be recognized by its hormone, an inhibitor to be recognized by its enzyme, an enzyme to be recognized by its inhibitor, a cofactor to be recognized by its cofactor enzyme binding site, a cofactor enzyme binding site to be recognized by its cofactor, a binding ligand to be recognized by its substrate, or a combination of the foregoing.

39. The composition of claim 28, wherein the domain to said nucleic acid component and the domain to said cell of interest are natural, and said binder is attached to said nucleic acid component by means other than a natural binding site.

40. The composition of claim 39, wherein said binder comprises modified fibronectin or modified polylysine, or both.

41. The composition of claim 27, wherein said cell of interest is contained within an organism.

42. The composition of claim 27, further comprising said cell of interest.

43. A method of introducing a nucleic acid component into a cell comprising:

(a) providing the composition of claim 27; and

(b) administering said composition.

44. The method of claim 43, wherein administering is carried out *in vivo*.

45. The method of claim 43, wherein administering is carried out *ex vivo*.

46. A kit for introducing a nucleic acid component into a cell of interest, comprising in packaged containers or combination:

(a) a non-natural entity which comprises at least one domain to said nucleic acid component, and a domain to said cell of interest;

(b) a nucleic acid component, optionally with

(c) buffers and instructions.

47. A composition comprising:

an entity which comprises at least one domain to a cell of interest, wherein said domain or domains are attached to a nucleic acid component which is in non-double stranded form.

48. The composition of claim 47, wherein said entity comprises a binder.

49. The composition of claim 48, wherein said binder and said domain are the same.

50. The composition of claim 48, wherein said binder and said domain are different.

51. The composition of claim 48, wherein said binder is selected from a polymer, a matrix, a support, or a combination of any of the foregoing.

52. The composition of claim 47, wherein said cell is prokaryotic or eukaryotic.

53. The composition of claim 47, wherein said nucleic acid component is selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a virus, a viral fragment, a viral vector, a viroid, a phage, a plasmid, a plasmid vector, a bacterium and a bacterial fragment, or a combination of the foregoing.

54. The composition of claim 47, wherein said domain is selected from covalent bonding and noncovalent binding, or a combination thereof.

55. The composition of claim 54, wherein said noncovalent binding is selected from ionic interactions and hydrophobic interactions, or a combination thereof.

56. The composition of claim 54, wherein said noncovalent binding comprises a specific complex.

57. The composition of claim 56, wherein said specific complex is mediated by a ligand binding receptor.

58. The composition of claim 57, wherein said ligand binding receptor is selected from a polynucleotide sequence to be recognized by its complementary sequence, an antigen to be recognized by its corresponding monoclonal or polyclonal antibody, an antibody to be recognized by its corresponding antigen, a lectin to be recognized by its corresponding sugar, a hormone to be recognized by its receptor, a receptor to be recognized by its hormone, an inhibitor to be recognized by its enzyme, an enzyme to be recognized by its inhibitor, a cofactor to be recognized by its cofactor enzyme binding site, a cofactor enzyme binding site to be recognized by its cofactor, a binding ligand to be recognized by its substrate, or a combination of the foregoing.

59. The composition of claim 47, wherein said cell of interest is contained within an organism.

60. The composition of claim 47, further comprising said cell of interest.

61. A method of introducing a nucleic acid component into a cell comprising:

(a) providing the composition of claim 47; and

(b) administering said composition.

62. The method of claim 61, wherein administering is carried out *in vivo*.

63. The method of claim 61, wherein administering is carried out *ex vivo*.

64. A kit for introducing a nucleic acid component into a cell of interest, comprising in packaged containers or combinations:

(a) an entity which comprises a domain to said cell of interest, wherein said domain is attached to a nucleic acid component which is in non-double stranded form, optionally with

(b) buffers and instructions.

65. A composition comprising:

an entity which comprises a domain to a nucleic acid component, wherein said domain is attached to a cell of interest.

66. The composition of claim 65, wherein said entity comprises a binder.

67. The composition of claim 66, wherein said binder and said domain are the same.

68. The composition of claim 66, wherein said binder and said domain are different.

69. The composition of claim 66, wherein said binder is selected from a polymer, a matrix, a support, or a combination of any of the foregoing.

70. The composition of claim 66, wherein said nucleic acid component is selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a virus, a viral fragment, a viral vector, a viroid, a phage, a plasmid, a plasmid vector, a bacterium and a bacterial fragment, or a combination of the foregoing.

71. The composition of claim 65, wherein said cell is eukaryotic or prokaryotic.

72. The composition of claim 65, wherein said domain is selected from covalent bonding and noncovalent binding, or a combination thereof.

73. The composition of claim 72, wherein said noncovalent binding is selected from ionic interactions and hydrophobic interactions, or a combination thereof.

74. The composition of claim 72, wherein said noncovalent binding comprises a specific complex.

75. The composition of claim 74, wherein said specific complex is mediated by a ligand binding receptor.

76. The composition of claim 75, wherein said ligand binding receptor is selected from a polynucleotide sequence to be recognized by its complementary sequence, an antigen to be recognized by its corresponding monoclonal or polyclonal antibody, an antibody to be recognized by its corresponding antigen, a lectin to be recognized by its corresponding sugar, a hormone to be recognized

by its receptor, a receptor to be recognized by its hormone, an inhibitor to be recognized by its enzyme, an enzyme to be recognized by its inhibitor, a cofactor to be recognized by its cofactor enzyme binding site, a cofactor enzyme binding site to be recognized by its cofactor, a binding ligand to be recognized by its substrate, or a combination of the foregoing.

77. The composition of claim 65, further comprising said cell of interest.

78. The composition of claim 65, wherein said cell of interest is contained within an organism.

79. A method of introducing a nucleic acid component into a cell comprising:

(a) providing the composition of claim 65; and

(b) administering said composition.

80. The method of claim 79, wherein administering is carried out *in vivo*.

81. The method of claim 79, wherein administering is carried out *ex vivo*.

82. A kit for introducing a nucleic acid component into a cell of interest, comprising in packaged containers or combination:

(a) an entity which comprises a domain to said nucleic acid component, wherein said domain is attached to said cell of interest, optionally with

(b) buffers and instructions.

83. A multimeric complex composition comprising more than one monomeric unit attached.

(a) to each other through polymeric interactions, or

(b) to a binding matrix through polymeric interactions, or

(c) both (a) and (b)

84. The composition of claim 83, wherein the polymer or oligomer of said monomeric unit is linear or branched.

85. The composition of claim 83, wherein the polymer or oligomer of said monomeric unit comprises of homopolymer or heteropolymer.

86. The composition of claim 83, wherein said monomeric unit comprises an analyte-specific moiety.

87. The composition of claim 86, wherein said analyte-specific moiety is capable of recognizing a component in a biological system.

88. The composition of claim 87, wherein said biological system is selected from a virus, a phage, a bacterium, a cell or cellular material, a tissue, an organ and an organism, or a combination thereof.

89. The composition of claim 83, wherein said monomeric unit is selected from a naturally occurring compound, a modified natural compound, a

synthetic compound and a recombinantly produced compound, or a combination thereof.

90. The composition of claim 83, wherein said analyte-specific moiety is derived or selected from a protein, a polysaccharide, a fatty acid or fatty acid ester and a polynucleotide, or a combination of the foregoing.

91. The composition of claim 90, wherein said protein is selected from an antibody, a hormone, a growth factor, a lymphokine or cytokine and a cellular matrix protein, or a combination of any of the foregoing.

92. The composition of claim 91, wherein said antibody comprises a polyclonal or monoclonal antibody.

93. The composition of claim 90, wherein said polynucleotide is linear or circular.

94. The composition of claim 90, wherein said polynucleotide is single stranded.

95. The composition of claim 83, wherein the polymer or oligomer of said binding matrix is linear or branched.

96. The composition of claim 83, wherein the polymer or oligomer of said binding matrix comprises a homopolymer or heteropolymer.

97. The composition of claim 83, wherein said binding matrix is selected from a naturally occurring compound, a modified natural compound, a synthetic compound and a recombinantly produced compound, or a combination thereof.

98. The composition of claim 83, wherein said binding matrix comprises a member selected from a polypeptide, a polynucleotide and a polysaccharide, or a combination thereof.

99. The composition of claim 83, wherein said polymeric interactions are selected from ionic interactions, hydrogen bonding, dipole-dipole interactions, or a combination of the foregoing.

100. The composition of claim 99, wherein said ionic interactions comprise polycationic interactions or polycationic interactions.

101. The composition of claim 83, further comprising an entity attached to said binding matrix.

102. The composition of claim 101, wherein said entity comprises a ligand or a compound which increases binding of the binding matrix.

103. The composition of claim 83, in homogeneous form.

104. The composition of claim 83, in heterogeneous form.

105. A process for delivering a cell effector to a cell, comprising: providing the multimeric complex composition of claim 83 wherein said monomeric unit comprises said cell effector; and administering said composition.

106. The process of claim 105, wherein said composition is delivered *in vivo*.

107. The process of claim 105, wherein said composition is delivered *ex vivo*.

108. The process of claim 105, wherein said cell is contained in an organism.

109. A process for delivering a gene or fragment thereof to a cell, comprising:

providing the multimeric complex composition of claim 83, wherein said monomeric unit comprises said gene or gene fragment; and

administering said composition.

110. The process of claim 109, wherein said composition is delivered *in vivo*.

111. The process of claim 109, wherein said composition is delivered *ex vivo*.

112. The process of claim 109, wherein said cell is contained in an organism.

113. A multimeric composition comprising more than one component attached to a charged polymer, wherein said charged polymer is selected from a polycationic polymer, a polyionic polymer, a polynucleotide, a modified polynucleotide and a polynucleotide analog, or a combination of the foregoing.

114. The multimeric composition of claim 113, wherein said component comprises a protein.

115. The multimeric composition of claim 114, wherein said protein is selected from an antibody and an $F(ab')_2$ fragment, or both.

116. The multimeric composition of claim 115, wherein said antibody comprises a polyclonal or monoclonal antibody.

117. The multimeric composition of claim 115, wherein said antibody is further complex with a target comprising an enzyme.

118. A nucleic acid construct which when introduced into a cell codes for and expresses a non-native polymerase, said polymerase being capable of producing more than one copy of a nucleic acid sequence from said construct.

119. The construct of claim 118, further comprising a recognition site for said non-native polymerase.

120. The construct of claim 119, wherein said recognition site is complementary to a primer for said non-native polymerase.

121. The construct of claim 120, wherein said primer comprises transfer RNA (tRNA).

122. The construct of claim 118, wherein said non-native polymerase comprises a member selected from DNA polymerase, RNA polymerase and reverse transcriptase, or a combination thereof.

123. The construct of claim 122, wherein said RNA polymerase comprises a bacteriophage RNA polymerase.

124. The construct of claim 123, wherein said bacteriophage RNA polymerase is selected from T3, T7 and SP6, or a combination thereof.

125. The construct of claim 122, further comprising a promoter for said RNA polymerase.

126. The construct of claim 118, wherein said nucleic acid produced from said construct is selected from DNA, RNA, a DNA-RNA hybrid and a DNA-RNA chimera, or a combination of the foregoing.

127. The construct of claim 126, wherein said DNA or RNA comprises sense or antisense, or both.

128. A nucleic acid construct which when introduced into a cell produces a nucleic acid product comprising a non-native processing element, which

when in a compatible cell, said processing element is substantially removed during processing.

129. The construct of claim 128, wherein said processing element comprises an RNA processing element.

130. The construct of claim 129, wherein said RNA processing element is selected from an intron, a polyadenylation signal and a capping element, or a combination of the foregoing.

131. The construct of claim 128, wherein said nucleic acid product is single stranded.

132. The construct of claim 128, wherein said nucleic acid product is selected from antisense RNA, antisense DNA, sense RNA, sense DNA, a ribozyme and a protein binding nucleic acid sequence, or a combination of the foregoing.

133. The composition of claim 132, wherein said protein binding nucleic acid sequence comprises a decoy that binds a protein required for viral assembly or viral replication.

134. A process for selectively expressing a nucleic acid product in a cell, which product requires processing for functioning, said process comprising:

(i) providing a nucleic acid construct which when introduced into a cell produces a nucleic acid product comprising a non-native processing element, which when in a compatible cell, said processing element is substantially removed during processing; and (ii) introducing said construct into said cell.

135. The process of claim 134, wherein said processing element comprises an RNA processing element selected from an intron, a polyadenylation signal and a capping element, or a combination of the foregoing.

136. The process of claim 134, wherein said nucleic acid product is selected from antisense RNA, antisense DNA, sense RNA, sense DNA, a ribozyme and a protein binding nucleic acid sequence, or a combination of the foregoing.

137. The process of claim 134, wherein said construct is introduced *ex vivo* into said cell.

138. The process of claim 137, wherein said construct is introduced *in vivo* into said cell.

139. The process of claim 134, wherein said construct is introduced into a biological system containing said cell.

140. The process of claim 139, wherein said biological system is selected from an organism, an organ, a tissue and a culture, or a combination of the foregoing.

141. A composition comprising a primary nucleic acid component which upon introduction into a cell produces a secondary nucleic acid component which is capable of producing a nucleic acid product, or a tertiary nucleic acid component, or both, wherein said primary nucleic acid component is not obtained with said secondary or tertiary component or said nucleic acid product.

142. The composition of claim 141, wherein said cell is eukaroytic or prokaryotic.

143. The composition of claim 141, wherein said primary nucleic acid component is selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a virus, a viral fragment, a viral vector, a viroid, a phage, a phage, a plasmid, a plasmid vector, a bacterium and a bacterial fragment, or a combination of the foregoing.

144. The composition of claim 141, wherein said primary nucleic acid component is single-stranded, double-stranded or partially double-stranded.

145. The composition of claim 141, wherein said primary nucleic acid component is selected from DNA, RNA and nucleic acid analogs, or a combination thereof.

146. The composition of claim 145, wherein said DNA, RNA or both are modified.

147. The composition of claim 141, wherein said secondary nucleic acid component or said tertiary nucleic acid component is selected from DNA, RNA, a DNA-RNA hybrid and a DNA-RNA chimera, or a combination of the foregoing.

148. The composition of claim 141, further comprising a signal processing sequence.

149. The composition of claim 148, wherein said signal processing sequence is selected from a promoter, an initiator, a terminator, an intron and a cellular localization element, or a combination of the foregoing.

150. The composition of claim 148, wherein said signal processing sequence is contained in an element selected from said primary nucleic acid component, said secondary nucleic acid component, said nucleic acid product and said tertiary nucleic acid component, or a combination of the foregoing.

151. The composition of claim 141, wherein said nucleic acid product is single-stranded.

152. The composition of claim 141, wherein said nucleic acid product is selected from antisense RNA, antisense DNA, a ribozyme and a protein binding nucleic acid sequence, or a combination of the foregoing.

153. The composition of claim 152, wherein said protein binding nucleic acid sequence comprises a decoy that binds a protein required for viral assembly or viral replication.

154. The composition of claim 141, wherein said component or nucleic acid production is mediated by a vector.

155. The composition of claim 154, wherein said vector is selected from a viral vector, a phage vector and a plasmid vector, or a combination thereof.

156. A cell containing the composition of claim 141.

157. The cell of claim 156, wherein said cell is a eukaryotic or prokaryotic.

158. The cell of claim 156, wherein said composition has been introduced *ex vivo* into said cell.

159. The cell of claim 156, wherein said composition has been introduced *in vivo* into said cell.

160. A secondary or tertiary nucleic acid component or nucleic acid product produced from the composition of claim 1.

161. A composition of matter comprising a nucleic acid component which when present in a cell produces a non-natural nucleic acid product, which product comprises (i) a portion of a localizing localizing entity, and (ii) a nucleic acid sequence of interest.

162. The composition of claim 161, wherein said portion of the localizing entity (i) is sufficient to permit localization of said non-natural nucleic acid product.

163. The composition of claim 161, wherein said said portion of the localizing entity (i) comprises a cytoplasmic or nuclear localization signalling sequence.

164. The composition of claim 161, wherein said nucleic acid sequence of interest (ii) is selected from DNA, RNA, a DNA-RNA hybrid and a DNA-RNA chimera, or a combination of the foregoing.

165. The composition of claim 164, wherein said RNA comprises a nuclear localized RNA complexed with protein molecules.

166. The composition of claim 165, wherein said nuclear localized RNA comprises a snRNA.

167. The composition of claim 166, wherein said snRNA comprises U1 or U2, or both.

168. The composition of claim 161, wherein said non-natural nucleic acid product is single-stranded.

169. The composition of claim 161, wherein said non-natural nucleic acid product is selected from antisense RNA, antisense DNA, sense RNA, sense DNA, a ribozyme and a protein binding nucleic acid sequence.

170. The composition of claim 169, wherein said protein binding nucleic acid sequence comprises a decoy that binds a protein required for a viral assembly or viral replication.

171. The composition of claim 169, wherein said non-natural nucleic acid product comprises antisense RNA or antisense DNA and said portion of the localizing entity (I) comprises a nuclear localization signalling sequence.

172. The composition of claim 169, wherein said non-natural nucleic acid product comprises antisense RNA or antisense DNA and said portion of the localizing entity (I) comprises a cytoplasmic localization signalling sequence.

173. The composition of claim 169, wherein said non-natural nucleic acid product comprises sense RNA or sense DNA and said portion of a localizing entity (I) comprises a cytioplasmic localization signalling sequence.

174. The composition of claim 161, wherein said nucleic acid component is selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a virus, a viral fragment, a viral vector, a viroid, a phage, a

plasmid, a plasmid vector, a bacterium and a bacterial fragment, or a combination of the foregoing.

175. The composition of claim 174, wherein said nucleic acid is selected from DNA, RNA, a DNA-RNA hybrid and a DNA-RNA chimera, or a combination of the foregoing.

176. The composition of claim 174, wherein said nucleic acid is modified.

177. The composition of claim 161, wherein said cell is eukaryotic or prokaryotic.

178. The composition of claim 161, wherein the production of said nucleic acid pr duct is mediated by a vector.

179. The composition of claim 178, wherein said vector is selected from a viral vector, a phage vector and a plasmid vector, or a combination thereof.

180. A cell containing the composition of claim 161.

181. The cell of claim 180, wherein said cell is eukaryotic or prokaryotic.

182. The cell of claim 180, wherein said composition has been introduced ex vivo into said cell.

183. The cell of claim 180, wherein said composition has been introduced in vivo into said cell.

184. A biological system containing the cell of claim 180.

185. The biological system of claim 184, wherein said system is selected from an organism, an organ, a tissue and a culture, or a combination thereof.

186. A process for localizing a nucleic acid product in a eukaryotic cell, comprising:

(a) providing a composition of matter comprising a nucleic acid component which when present in a cell produces a non-natural nucleic acid product, which product comprises:

(i) a portion of a localizing entity, and

(ii) a nucleic acid sequence of interest;

and (b) introducing said composition into said cell or into a biological system containing said cell.

187. The process of claim 186, wherein said portion of the localizing entity (l) is sufficient to permit localization of said nucleic acid product.

188. The process of claim 186, wherein said nucleic acid product comprises antisense RNA or antisense DNA and said portion of a localizing entity (l) comprises a nuclear localization signalling sequence.

189. The process of claim 186, wherein said nucleic acid product comprises sense RNA or sense DNA and said portion of a localizing entity (i) comprises a nuclear localization signalling sequence.

190. The process of claim 186, wherein said nucleic acid product comprises sense RNA or sense DNA and said portion of a localizing entity (l) comprises a nuclear localization signalling sequence.

191. The process of claim 186, wherein said nucleic acid product comprises snRNA.

192. The process of claim 191, wherein said snRNA comprises U1 or U2 or both.

193. The process of claim 186, wherein said composition is introduced

ex vivo into said cell or into a biological system containing said cell.

194. The process of claim 186, wherein said composition is introduced *in vivo* into said cell or into a biological system containing said cell.

195. A nucleic acid component which upon introduction into a cell is capable of producing more than one specific nucleic acid sequence, each such specific sequence so produced being substantially nonhomologous with each other and being either complementary with a specific portion of a single-stranded nucleic acid of interest in a cell or capable of binding to a specific protein of interest in a cell.

196. The nucleic acid component of claim 195, wherein said single-stranded nucleic acids of interest are part of the same polynucleotide sequence or part of different polynucleotide sequences.

197. The nucleic acid component of claim 195, wherein said single-stranded nucleic acids of interest comprise a viral sequence.

198. The nucleic acid component of claim 195, wherein said component is derived or selected from a nucleic acid, a nucleic acid construct, a nucleic acid conjugate, a virus, a viral fragment, a viral vector, a phage, a plasmid, a bacterium and a bacterial fragment, or a combination of any of the foregoing.

199. The nucleic acid component of claim 195, wherein said nucleic acid is selected from DNA, RNA and nucleic acid analogs, or a combination thereof.

200. The nucleic acid component of claim 199, wherein said DNA or RNA is modified.

201. The nucleic acid component of claim 195, comprising either more than one promoter or more than one initiator, or both.

202. The nucleic acid component of claim 195, wherein each said specific nucleic acid sequence product is capable of being produced independently from either different promoters, different initiators, or a combination of both.

203. The nucleic acid component of claim 195, wherein said specific nucleic acid sequence products are either complementary to a viral or cellular RNA, or bind to a viral or cellular protein, or or a combination of the foregoing.

204. The nucleic acid component of claim 203, wherein said complementary specific nucleic acid sequence products are capable of acting as antisense.

205. The nucleic acid component of claim 204, wherein said viral or cellular protein comprises a localizing protein or a decoy protein.

206. The nucleic acid component of claim 205, wherein said localizing protein comprises a nuclear localizing protein or a cytoplasmic localizing protein.

207. The nucleic acid component of claim 205, wherein said decoy protein binds a protein required for viral assembly or viral replication.

208. The nucleic acid component of claim 195, wherein said specific nucleic acid sequence products are selected from antisense RNA, antisense DNA, a ribozyme and a protein binding nucleic acid sequence, or a combination of any of the foregoing.

209. The nucleic acid component of claim 195, further comprising a means for delivering said component to a cell containing the nucleic acid of interest or the specific protein of interest.

210. A process for increasing cellular resistance to a virus of interest, comprising:

(a) providing:

(i) transformed cells phenotypically resistant to said virus; and

(ii) a reagent capable of binding to said virus or to a virus-specific site on said cells;

and (b) administering said reagent to a biological system containing said cells to increase the resistance of said cells to the virus of interest.

211. The process of claim 210, wherein said biological system is selected from an organism, an organ and a tissue, or a combination thereof.

212. The process of claim 210, wherein said viral resistant cells (i) are eukaryotic or prokaryotic.

213. The process of claim 210, wherein said viral resistant cells (i) comprise a nucleic acid sequence selected from antisense RNA, antisense DNA, sense RNA, sense DNA, a ribozyme and a protein binding nucleic acid sequence, or a combination of the foregoing.

214. The process of claim 210, wherein said virus binding reagent (ii) is selected from an antibody, a virus binding protein, a cell receptor protein and

an agent capable of stimulating production of a virus binding protein, or a combination of the foregoing.

215. The process of claim 214, wherein said antibody comprises a polyclonal or monoclonal antibody.

216. The process of claim 215, wherein said polyclonal or monoclonal antibody is specific to an epitope of said virus of interest.

217. The process of claim 214, wherein said virus binding protein comprises a CD4 receptor.

218. The process of claim 214, wherein said cell receptor protein comprises a gp24 protein.

219. The process of claim 214, wherein said production stimulating agent is selected from an immunological response enhancing adjuvant and a viral antigen, or a combination of both.

220. The process of claim 210 wherein said reagent (ii) is administered *in vivo* to said cells.

221. The process of claim 210, wherein said reagent (ii) is administered *ex vivo* to said cells.

222. The process of claim 210, further comprising administering an additional viral resistance enhancing agent (iii).

223. The process of claim 222, wherein said additional viral resistance enhancing agent (iii) is selected from a protease inhibitor, a nucleoside analog, or a combination thereof.

224. The process of claim 222, wherein said additional viral resistance enhancing agent (iii) is administered before administering said binding reagent (ii).

225. The process of claim 222, wherein said additional viral resistance enhancing agent (iii) is administered after administering said binding reagent (ii).

226. The process of claim 222, wherein said additional viral resistance enhancing agent (iii) is administered at about the same time that said binding reagent (ii) is administered.

227. A biological system with increased viral resistance obtained by the process of claim 210.

228. A biological system with increased viral resistance obtained by the process of claim 222.

229. A nucleic acid construct which when introduced into a cell produces a non-natural product, which product comprises two components:

(i) a binding component capable of binding to a cellular component; and (ii) a localization component capable of dislocating said cellular component when bound to said product.

230. The construct of claim 229, wherein said product comprises a protein or a nucleic acid, or a combination of both.

231. The construct of claim 230, wherein said protein comprises an antibody.

232. The construct of claim 231, wherein said antibody comprises a polyclonal or monoclonal antibody.

233. The construct of claim 232 wherein said polyclonal or monoclonal antibody is directed to a cellular component inside the cell.

234. The construct of claim 229, wherein said cellular component is selected from a nucleic acid, a protein, a virus, a phage, a product from another construct, a metabolite and an allosteric compound, or a combination of the foregoing.

235. The construct of claim 234, wherein said protein is selected from a viral or non-viral enzyme, a gene suppressor, a phosphorylated protein, or a combination of the foregoing.

236. The construct of claim 235, wherein said phosphorylated protein comprises an oncogene.

237. The construct of claim 229, wherein said binding component of said product is selected from a nucleic acid, a protein and a binding entity, or a combination thereof.

238. The construct of claim 229, wherein said nucleic acid comprises a sequence selected from a complementary sequence to said cellular component and a sequence to a nucleic acid binding protein, or a combination of both.

239. The construct of claim 237, wherein said protein is selected from an antibody, a receptor and a nucleic acid binding protein, or a combination of the foregoing.

240. The construct of claim 237, wherein said binding entity is capable of binding metabolites.

241. The construct of claim 229, wherein said localization component is selected from a nuclear localizing entity, a cytoplasmic localizing entity and a cell membrane localizing entity, or a combination thereof.

242. The construct of claim 229, wherein said localization component comprises a member selected from a nucleic acid sequence, a nucleic acid structure and a peptide or oligopeptide, or a combination of the foregoing.

243. The construct of claim 242, wherein said nucleic acid structure comprises a stem and loop structure.

244. A process for dislocating a cellular component in a cell, comprising:

(I) providing:

(a) a nucleic acid construct which when introduced into a cell produces a non-natural product, which product comprises two components:

(i) a binding component capable of binding to a cellular component; and

(ii) a localization component capable of dislocating said cellular component when bound to said product;

and (II) introducing said nucleic acid construct into a cell of interest or a biological system containing said cell of interest.

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